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     NIPPON ELECTRIC CO; NIPPON ELECTRIC ENG  
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     MOCHIZUKI AKIO; YOSHIZAWA EIICHI

TI - Crossed type **dipole antenna** for artificial satellite - incorporates **reflective elements** made up of conducting material arranged at end part of **antenna** support strut which **reflect** electromagnetic waves to **antenna** front part  
 AB - J07094940 The crossed type **dipole antenna** incorporates two sets of **dipole elements** (1a-1d) which are arranged mutually perpendicular to the vertical surface of a set of **antenna struts** (2a-2c). The **dipole elements** emit electromagnetic waves towards the end part of **antenna** support strut (2c). At the end part of the **antenna** support strut two sets of **reflective elements** (5a-5d) consisting of conducting material are arranged. The **reflective elements** reflect the electromagnetic waves from the **dipole elements** to the front of **antenna**. A quarter wave length type choke **element** (7) is arranged between the **dipole elements** and the root part of the **antenna** support strut.  
 - ADVANTAGE - Improves emission gain and **directivity**. Prevents electromagnetic wave emission to back of **antenna** by providing quarter wave length choke **element**.  
 - (Dwg.3/7)  
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 PA - (NIDE ) NEC CORP  
     - (NIDE ) NIPPON DENKI ENG KK  
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 IN - MOCHIZUKI AKIO; others: 01  
 PA - NEC CORP; others: 01  
 TI - CROSS **DIPOLE ANTENNA**  
 AB - PURPOSE: To improve the **omnidirectivity** of radiation gain of a cross **dipole antenna** and to reduce the radiation of a reversely turned **circularly polarized** wave to the side and rear **directions** of the **antenna**.

- CONSTITUTION: Two half-wavelength dipole elements respectively consisting of dipole elements 1a-1d arranged in the vertical face of an antenna supporting column 2A radiate a positively turned circularly polarized wave in a direction to the top part of the column 2A (the front of the antenna). Reflection elements consisting of conductor elements 5a-5d are arranged on the top part of the column 2A to reflect a radio wave applied to the front of the antenna to the side direction of the antenna. A lambda/4 wavelength type choke element is arranged between the elements 1a-1d and the bottom part of the column 2A to interrupt the radiation of radio waves mainly consisting of a reversely turned circularly polarized wave to the rear part of the antenna.
- H01Q21/26 ;H01Q19/28